

## CLAIMS

## WHAT IS CLAIMED IS

- Sub 3/ 1. A retail display system comprising:
- a plastic strut extending from a lower end to an upper end and having a front, a back, a left side, a right side, a length, and a width and bearing at least one vertical array of engagement features;
- 5 a header, proximate the strut upper end, and having a width and a height;
- a plurality of product-holding elements, each engaged to an associated feature of the engagement features to secure such element to the strut, wherein at least a first of the product-holding elements comprises a tray formed of folded corrugated material for containing the associated product.
2. The retail display system of claim 1 wherein:
- said tray held so that a bottom wall of the tray has a front to back declination.
3. The retail display system of claim 2 wherein means for providing said declination comprise at least one of
- a foldably deployable portion of a back wall of the tray;
- a molded plastic support fixture having a declined surface for engaging the bottom wall
- 5 of the tray; and
- a folded corrugated base for holding the strut at an angle off vertical.
4. The retail display system of claim 1 wherein:
- said tray is formed of corrugated cardboard and said first product-holding element further comprises a pair of fasteners extending through an associated pair of apertures in a back panel of the tray and extending into two associated ones of the engagement features..
- Sub 3/ 5. The retail display system of claim 1 wherein:
- said first product-holding element comprises a molded plastic support fixture for supporting the tray.
6. ~~The retail display system of claim 5 wherein:~~

the tray support fixture comprises the unitarily-formed combination of:

a back wall having left and right sides;

left and right pairs of upper and lower fingers extending rearward from the tray support fixture back and having dimensions effective to extend around the strut left and right sides, respectively, and engage the strut back to prevent forward movement of the tray support fixture when installed on the strut;

left and right sidewalls extending forward from the back wall and each having an inclined forward edge for supporting a back panel of the associated tray; and

a base extending forward from the sidewalls and having a declined upper surface for supporting a bottom panel of the associated tray.

7. The retail display system of claim 6 wherein:

the at least one vertical array of engagement features comprises:

a vertical array of first apertures in a raised central portion of the plastic strut front; and

a vertical array of pairs of second apertures, one aperture in each pair on either side of said raised central portion;

each tray support fixture further includes:

an aperture in the back wall;

a latch depending from an upper end of the back wall aperture and having a projection for engaging a select one of the first apertures for holding the tray support fixture on the strut in a vertical position associated with such select first aperture; and

an aperture in the base through which a user may insert a finger to engage the latch to flex the latch to disengage the projection from the select first aperture to permit the tray support fixture to be moved vertically; and

each hook includes:

a pair of projections for engaging the apertures in an associated pair of said pairs of second apertures;

a body portion spanning said pair of projections; and

at least one hook portion, extending forward from said body portion from which the associated plurality of product packages may be suspended.

8. The retail display system of claim 7 wherein:

each hook is unitarily molded plastic piece;

in at least one of said hooks there are two hook portions with a separation of at least 5cm; and

each hook portion is formed of a single shaft extending from a single proximal root at the associated body portion to a single distal tip.

9. The retail display system of claim 1 wherein:

the strut and header are unitarily-formed as a single molded piece;

the strut width is between 5cm and 10cm;

the strut length is between 0.7m and 1.5m;

the header width is at least 12cm;

the header height is at least 10cm, but less than the header width;

the header has inwardly-directed perimeter projections for retaining a graphic panel;

and

at least one of the product-holding elements is a product hook, from which a plurality of product packages may be suspended.

10. The retail display system of claim 1 wherein at least one of the product-holding elements is a product hook assembly, from which a plurality of product packages may be suspended, comprising:

a transversely extending bar having a transversely-extending array of bar engagement features;

a pair of mounting prongs extending rearward from the bar for engagement with the associated engagement features of the strut;

a plurality of hook elements, each having:

a hook engagement feature complementary to the bar engagement features for securing the hook element to the bar; and

at least one shaft extending forward of the hook engagement feature, there being sufficient bar engagement features to permit a plurality of different numbers of said hook elements to be secured in a plurality of different combinations of transverse

positions along the bar.

- Sub 3/ 11. A corrugated product-carrying tray having front, back, left, right and bottom walls and having:
- central first engagement features for securing the tray to a central first support; and
- left and right second engagement features for alternatively securing the tray to left and right tray-supporting brackets.
12. A corrugated product-carrying tray having front, back, left, right and bottom walls in at least one assembled condition wherein:
- the back wall is formed having a first layer and a second layer behind the first layer, a folding portion of the second layer being foldable:
- from a first folding portion condition coplanar to a majority of a remainder of the second layer;
- to a second folding portion condition extending to the rear of the remainder so as to locally offset the remainder from a vertical support surface to which the tray is secured and thereby cause a front-to-back declination of the tray when an attachment portion of the tray, above the folding portion, is secured to the support surface.
13. The tray of claim 12 formed from a one-piece blank in a preassembly initial condition having first and second opposed faces and extending longitudinally from a fore end to an aft end and having:
- a first portion;
- a second portion principally aft of the first portion and at least in part meeting the first portion at a first fold line;
- a third portion principally aft of the second portion and at least in part meeting the second portion at a second fold line;
- a fourth portion principally aft of the third portion and at least in part meeting the third portion at a third fold line and having at least one internal cut line;
- a fifth portion, principally aft of the fourth portion and at least in part meeting the fourth portion at a fourth fold line;
- left and right sixth portions at least in part meeting the third portion at left and right

fifth fold lines along left and right sides of the third portion;

15 left and right seventh portions at least in part meeting the respective left and right sixth portions at left and right sixth fold lines and each separated from the second portion by at least one cut line; and

left and right eighth portions at least in part meeting the respective left and right sixth portions at left and right seventh fold lines and each separated from the fourth portion by at least one cut line, wherein in at least a first assembled condition:

the at least one internal cut line defines said back wall folding portion;

the blank is folded along the respective fifth fold lines so that the sixth portions at least partially define the left and right walls;

25 the blank is folded along the first, second, and sixth fold lines to sandwich the seventh portions between the first and second portions so that the first, second and seventh portions at least partially define the front wall; and

the blank is folded along the third, fourth, and seventh fold lines to sandwich the eighth portions between the third and fourth portions so that the fourth, fifth and eighth portions at least partly define the back wall with the fourth portion principally defining said back wall second layer.

14. The tray of claim 13 wherein with the blank in the initial condition:

the first position is a foremost portion and has at least one first tab at a fore end thereof; at least one first aperture is provided proximate the second fold line and is

5 complementary to the at least one first tab for receiving the at least one first tab with the tray in the first assembled condition;

the fifth portion has at least one second tab at an aft end thereof;

at least one second aperture is provided proximate the third fold line and is complementary to the at least one second tab for receiving the at least one second tab with the tray in the first assembled condition.

15. The tray of claim 13 wherein in the initial condition the blank further comprises an aft-most ninth portion, principally aft of the fifth portion, and having at least one third tab at an aft end thereof;

in a second such assembled condition the blank is folded along the eighth fold line and

5 the ninth portion lies substantially entirely flat atop the third portion;

in a third such assembled condition, alternative to the second assembled condition, the blank is folded along the eighth fold line and at least one ninth fold line internal to the ninth portion and the third tab is received by a third aperture internal to the fifth portion so that the ninth portion provides a forwardly offset lower frontal portion of the back wall.

16. The tray of claim 12 wherein the folding portion includes lower and upper portions in major part separated by a fold line;

5 the upper portion has surfaces of effective dimensions to contact complementary surfaces of the remainder, when in the second condition, the surfaces and complementary surfaces being formed along at least one cut line separating the folding portion from the remainder in the first folding portion condition;

in the second folding portion condition, the lower portion extends at least partially rearward from a root proximate the bottom wall to the fold line and the upper portion extends from the fold line upward and forward to the remainder.

17. A retail display system comprising:

a plastic strut extending from a lower end to an upper end and having a front, a back, a left side, a right side, a length, and a width and bearing at least one vertical array of engagement features which comprises:

5 a vertical array of first apertures in a raised central portion of the plastic strut front; and

a vertical array of pairs of second apertures, one aperture in each pair on either side of said raised central portion;

10 a plurality of product-holding elements, each engaged to an associated feature of the engagement features to secure such element to the strut.

Sub 18. A kit for forming a retail display comprising:

a plastic strut extending from a lower end to an upper end and having a front, a back, a left side, a right side, a length, and a width and bearing at least one vertical array of engagement features; and

5 a header, which is either unitarily formed with, secured to, or securable to the strut

proximate the strut upper end;

a plurality of product-holding elements, securable to and removable from the strut, each having a feature engageable to an associated feature of the engagement features to secure such element to the strut.

19. The kit of claim 18 packaged in a single carton and further comprising:

a plurality of corrugated cardboard trays, each optionally containing product to be sold from the display and each securable to at least an associated one of the product holding elements to be held by such associated element when the display is assembled from the kit.

20. The kit of claim 18 further comprising:

a folded corrugated cardboard base for assembly to the strut and header for supporting the strut and header above a ground surface.

21. The kit of claim 20 wherein the base has front, left and right sides, the front side having upper and lower portions and a step having an aperture for receiving a lower end portion of the strut when assembled therewith.

22. The kit of claim 18 packaged preassembled in a single carton with said product holding elements and product held thereby and wherein the kit includes a corrugated cardboard handle having a handle aperture and an attachment aperture, optionally combined with the handle aperture, the attachment aperture receiving a mounting clip secured to at least one of the header and strut so as to enable a user to grip the handle through the handle aperture and withdraw the kit upward through an open end of the carton by pulling upward on the handle and then disengage the handle from the clip by drawing the handle downward relative to the clip.

23. The kit of claim 18 further comprising:

a pair of first mounting brackets for mounting the combined header and strut to a shelf system; and

a pair of second mounting brackets for mounting the combined header and strut to a wire rack.

24. The kit of claim 18 further comprising:

upper and lower mounting brackets for mounting the combined header and strut to an environmental support, at least one of which brackets comprises:

a first feature engageable to an associated feature of the engagement features to secure such bracket to the strut; and

a second feature engageable to the environmental support.

25. A method for efficiently providing a plurality of retail displays for use in a plurality of applications, comprising:

providing a plurality of identically-constructed molded plastic chassis, comprising:

a header for bearing a display/graphic; and

a strut, depending from the header;

providing a plurality of product holding fixtures of a plurality of forms and having engagement features complementary to engagement features of the strut;

providing a plurality of mounting elements of a plurality of forms respectively for mounting the strut to associated environmental structures; and

assembling said plurality of displays, in a plurality of configurations associated with different combinations of said forms of product holding fixtures and said mounting elements.

26. The method of claim 25 wherein the identically-constructed molded plastic chassis are formed in a plurality of colors.

27. The method of claim 26 wherein said step of assembling includes cutting or breaking at least some of the struts to associated desired lengths.

28. A dispenser for dispensing articles comprising:

a vacuum-formed plastic member having surfaces defining left, right and rear interior surfaces of a chute assembly; and

a shroud member having a surface defining a front interior surface of said chute assembly and having a surface defining a front exterior surface of said chute assembly and having surfaces defining left and right side exterior surface portions of said chute assembly.



29. The dispenser of claim 28 wherein:

said articles comprise elongate rectilinear boxes;

said vacuum-formed plastic member surfaces define first and second tandem flow paths

for first and second pluralities of such articles from respective first and second upstream path ends at an upper end of the chute assembly through which articles may be introduced to the dispenser to respective first and second downstream path ends at a lower end of the chute assembly through which articles may be dispensed from the dispenser;

said first upstream path end is behind and at equal height to said second upstream path end and said first downstream path end is behind and below said second downstream path end.

30. A dispenser for dispensing articles comprising:

a vacuum-formed plastic member having surfaces defining first and second flow paths for first and second pluralities of such articles from respective first and second upstream path ends at an upper dispenser inlet through which articles may be introduced to the dispenser to respective first and second downstream path ends at a lower dispenser outlet through which articles may be dispensed from the dispenser, wherein said first upstream path end is behind said second upstream path end and said first downstream path end is behind and below said second downstream path end; and

a shroud member having a surface defining a front interior surface of said dispenser and having a surface defining a front exterior surface of said dispenser and having surfaces defining left and right side exterior surface portions of said dispenser.

31. A retail display apparatus, comprising:

a chassis comprising:

a generally rectangular central portion of a folded box construction formed in major part of material selected from the group consisting of boxboard and corrugated plastic and fibrous materials; and

at least left and right plastic frame members secured proximate left and right sides of the central portion;

a base supporting the chassis above a ground surface; and

a plurality of shelf assemblies having pairs of left and right engagement features for removable securement to left and right engagement features of the chassis.

32. The apparatus of claim 31 wherein:

the base comprises a folded multi-wall corrugated structure;

the chassis engagement features comprise left and right vertical arrays of apertures in a front of the central portion; and

5 at least one of the shelf assemblies comprises:

a corrugated tray; and

left and right molded plastic brackets respectively having the left and right engagement features of the shelf assembly.

33. The apparatus of claim 32 further comprising a hinged header member secured to the chassis, the header hingeable between a deployed condition wherein a first surface of the header extends upward from the chassis member, substantially coplanar with the front face, and a stowed condition located substantially behind the chassis.

34. The apparatus of claim 32 further comprising a pair of left and right generally quadrilateral trim panels held by associated forwardly open channels in the left and right frame members, respectively.